

# PROGETTO "ENERGIA DELL'OLIO DI SEGEZIA"

da 227,421 MWp a Troia (FG)



# D-14

## PROGETTO DEFINITIVO

Scheda tecnica inverter



### Proponente

**Peridot Solar Green S.r.l.**

Via Alberico Albricci, 7 - 20122 Milano (MI)



### Investitore agricolo superintensivo

**OXY CAPITAL ADVISOR S.R.L.**

Via A. Bertani, 6 - 20154 (MI)



### Progetto dell'inserimento paesaggistico e mitigazione

*Progettista:* Agr. Fabrizio Cembalo Sambiasi, Arch. Alessandro Visalli

*Collaboratori:* Urb. Daniela Marrone, Arch. Anna Manzo, Agr. Giuseppe Maria Massa



### Progettazione elettrica e civile

*Progettista:* Ing. Rolando Roberto, Ing. Giselle Roberto

*Collaboratori:* Ing. Marco Balzano, Ing. Simone Bonacini



### Progettazione oliveto superintensivo

*Progettista:* Agron. Giuseppe Rutigliano

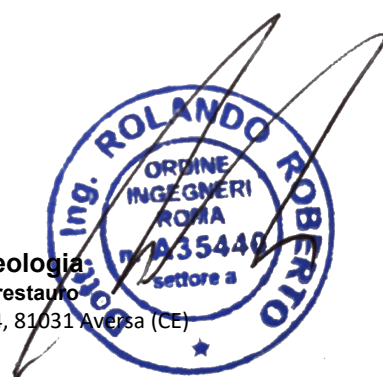
### Consulenza geologia

Geol. Gaetano Ciccarelli

### Consulenza archeologia:

**ARES archeologia & restauro**

via O. Marchione n. 24, 81031 Aversa (CE)



06 ● 2023

| rev | descrizione    | formato | elaborazione    | controllo       | approvazione    |
|-----|----------------|---------|-----------------|-----------------|-----------------|
| 00  | Prima consegna | A4      | Rolando Roberto | Giselle Roberto | Rolando Roberto |
| 01  |                |         |                 |                 |                 |
| 02  |                |         |                 |                 |                 |
| 03  |                |         |                 |                 |                 |
| 04  |                |         |                 |                 |                 |
| 05  |                |         |                 |                 |                 |
| 06  |                |         |                 |                 |                 |
| 07  |                |         |                 |                 |                 |

# SG350HX

Multi-MPPT String Inverter for 1500 Vdc System



## HIGH YIELD

- Up to 16 MPPTs with max. efficiency 99%
- 20A per string, compatible with 500Wp+ module
- Data exchange with tracker system, improving yield

## LOW COST

- Q at night function, save investment
- Power line communication (PLC)
- Smart IV Curve diagnosis, active O&M

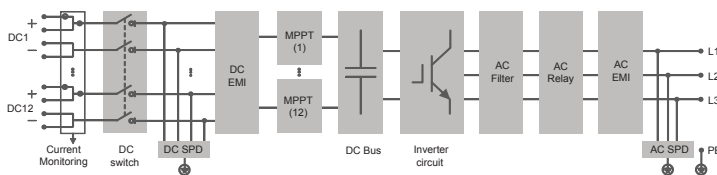
## GRID SUPPORT

- $SCR \geq 1.15$  stable operation in extremely weak grid
- Reactive power response time <30ms
- Compliant with global grid code

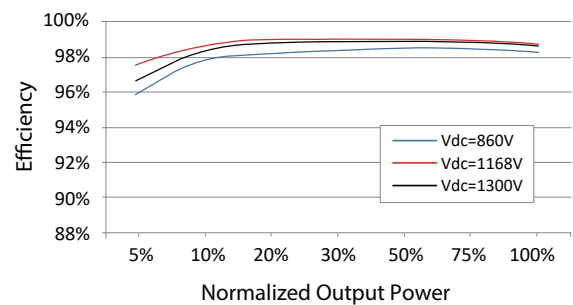
## PROVEN SAFETY

- 2 strings per MPPT, no fear of string reverse connection
- Integrated DC switch, automatically cut off the fault
- 24h real-time AC and DC insulation monitoring

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



| Type designation                                        | SG350HX                                                                                                                                                       |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                       |                                                                                                                                                               |
| Max. PV input voltage                                   | 1500 V                                                                                                                                                        |
| Min. PV input voltage / Startup input voltage           | 500 V / 550 V                                                                                                                                                 |
| Nominal PV input voltage                                | 1080 V                                                                                                                                                        |
| MPP voltage range                                       | 500 V – 1500 V                                                                                                                                                |
| No. of independent MPP inputs                           | 12 (optional: 16)                                                                                                                                             |
| Max. number of input connector per MPPT                 | 2                                                                                                                                                             |
| Max. PV input current                                   | 12 * 40 A (Optional: 16 * 30 A)                                                                                                                               |
| Max. DC short-circuit current per MPPT                  | 60 A                                                                                                                                                          |
| <b>Output (AC)</b>                                      |                                                                                                                                                               |
| AC output power                                         | 352 kVA @ 30°C / 320 kVA @40 °C / 295 kVA @50°C                                                                                                               |
| Max. AC output current                                  | 254 A                                                                                                                                                         |
| Nominal AC voltage                                      | 3 / PE, 800 V                                                                                                                                                 |
| AC voltage range                                        | 640 – 920V                                                                                                                                                    |
| Nominal grid frequency / Grid frequency range           | 50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz                                                                                                                        |
| THD                                                     | < 3 % (at nominal power)                                                                                                                                      |
| DC current injection                                    | < 0.5 % In                                                                                                                                                    |
| Power factor at nominal power / Adjustable power factor | > 0.99 / 0.8 leading – 0.8 lagging                                                                                                                            |
| Feed-in phases / Connection phases                      | 3 / 3                                                                                                                                                         |
| <b>Efficiency</b>                                       |                                                                                                                                                               |
| Max. efficiency / European efficiency                   | 99.02 % / 98.8 %                                                                                                                                              |
| <b>Protection</b>                                       |                                                                                                                                                               |
| DC reverse connection protection                        | Yes                                                                                                                                                           |
| AC short circuit protection                             | Yes                                                                                                                                                           |
| Leakage current protection                              | Yes                                                                                                                                                           |
| Grid monitoring                                         | Yes                                                                                                                                                           |
| Ground fault monitoring                                 | Yes                                                                                                                                                           |
| DC switch / AC switch                                   | Yes / No                                                                                                                                                      |
| PV string current monitoring                            | Yes                                                                                                                                                           |
| Q at night function                                     | Yes                                                                                                                                                           |
| Anti-PID and PID recovery function                      | Optional                                                                                                                                                      |
| Surge protection                                        | DC Type II / AC Type II                                                                                                                                       |
| <b>General Data</b>                                     |                                                                                                                                                               |
| Dimensions (W*H*D)                                      | 1136 * 870 * 361 mm                                                                                                                                           |
| Weight*                                                 | ≤116 kg                                                                                                                                                       |
| Isolation method                                        | Transformerless                                                                                                                                               |
| Degree of protection                                    | IP66                                                                                                                                                          |
| Power consumption at night                              | < 6 W                                                                                                                                                         |
| Operating ambient temperature range                     | -30 to 60°C                                                                                                                                                   |
| Allowable relative humidity range                       | 0 – 100 %                                                                                                                                                     |
| Cooling method                                          | Smart forced air cooling                                                                                                                                      |
| Max. operating altitude                                 | 4000 m (> 3000 m derating)                                                                                                                                    |
| Display                                                 | LED, Bluetooth+APP                                                                                                                                            |
| Communication                                           | RS485 / PLC                                                                                                                                                   |
| DC connection type                                      | MC4-Evo2 (Max. 6 mm <sup>2</sup> , optional 10mm <sup>2</sup> )                                                                                               |
| AC connection type                                      | Support OT/DT terminal (Max. 400 mm <sup>2</sup> )                                                                                                            |
| Compliance                                              | IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, EN 50549-1 /2, UNE 206007-1:2013, P.O.12.3, UTE C15-712-1:2013 |
| Grid Support                                            | Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control, Q-U control, P-f control                                        |

\*Due to the multi-supplier for some key components, the actual weight may have a ±8% deviation, please refer to the actually delivered product.